Serial No.: 09/423,546

Filed: November 12, 1999

Page : 2 of 7

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

<u>Listing of Claims</u>:

1-43. (Cancelled)

44. (Previously Presented) A method of reducing adverse effects of endotoxin in a warm-blooded animal, which comprises administering to the warm-blooded animal an effective amount of a composition comprising rough, complete-core lipopolysaccharide (LPS) antigens of at least two Gram negative bacterial strains, each of said strains having a classification independently selected from the following classifications: *E. coli; Pseudomonas; and Bacteroides*, said antigens being separated from cells of said bacterial strains.

45-54. (Cancelled)

- 55. (Previously Presented) The method of claim 44 in which the composition comprises Ra LPS incorporated in a liposome.
- 56. (Previously Presented) The method of claim 55 in which the composition comprises E. coli K12 Ra LPS in a liposome.
- 57. (Previously Presented) The method of claim 55 in which the composition comprises a cocktail of Ra LPSs from multiple species of Gram-negative bacteria incorporated in liposomes.
- 58. (Previously Presented) The method of claim 44 or claim 57 in which the cocktail comprises Ra LPSs from at least three strains of Gram-negative bacteria, each of said

Serial No.: 09/423,546

Filed: November 12, 1999

Page : 3 of 7

strains being classified in a different one of the following classifications: E. coli K12, E. coli R1, Bacteroides fragilis, and Pseudomonas aeruginosa.

- 59. (Previously Presented) The method of claim 44 in which one of said bacterial strains is classified as *E. coli* K12.
 - 60. (Cancelled)
- 61. (Previously Presented) The method of claim 59 in which the animal is a mammal.
- 62. (Previously Presented) The method of claim 61 in which the animal is a human patient.
- 63. (Previously Presented) The method of claim 59 in which the composition comprises LPS of an Ra rough *E. coli* K12.
- 64. (Previously Presented) The method of claim 44 in which both of said at least two bacterial strains are classified as *E. coli*.
 - 65. (Cancelled)
- 66. (Previously Presented) The method of claim 44 or claim 59 in which the composition comprises complete-core, rough, LPS antigen from a third Gram-negative bacterial strain different from the first and from the second Gram-negative bacterial strains.

Serial No.: 09/423,546

Filed: November 12, 1999

Page : 4 of 7

67. (Previously Presented) The method of claim 66 in which the composition comprises complete-core, rough, LPS antigen from a fourth Gram-negative bacterial strain different from each of the first, the second, and the third Gram-negative bacterial strains.

68. (Previously Presented) The method of claim 59 in which the other of said Gram-negative bacterial strains is *E. coli* R1.

69-72. (Cancelled)

- 73. (Previously Presented) The method of claim 67 in which complete core antigen from each of the four bacterial strains is present in generally equal amounts by weight.
- 74. (Previously Presented) The method of claim 66 in which the composition comprises LPS antigens from at least two different Gram-negative bacterial strains of the same species.
- 75. (Previously Presented) The method of claim 59 in which the antigens cause the patient to produce an antibody that binds to an epitope in the core region of the LPS of at least one Gram-negative bacterial strain whose LPS is not part of the composition.
- 76. (Previously Presented) The method of claim 75 in which the patient's antibody binds to the LPS of at least one smooth Gram negative bacterial strain.

77. (Cancelled)

78. (Previously Presented) The method of claim 55 in which the ratio (weight:weight) of lipid in the liposome to the LPS antigens is between 1:1 and 5000:1.

Attorney's Docket No.: 08213-007001 Applicant: Elliott Bennett-Guerrero et al.

Serial No.: 09/423,546

: November 12, 1999 Filed

Page : 5 of 7

(Previously Presented) The method of claim 55 in which the ratio 79. (weight: weight) is between 10:1 and 1000:1.

- (Previously Presented) The method of claim 55 in which the liposome 80. comprises a component selected from the group consisting of: phospholipid, cholesterol, positively charged compounds, negatively charged compounds, and amphipathic compounds.
- (Previously Presented) The method of claim 55 in which the liposome is 81. a multilamellar type liposome (MLV).
- (Previously Presented) The method of claim 55 in which LPS in the acid 82. salt form is incorporated into the liposome.
- 83. (Previously Presented) The method of claim 55 in which the liposome is a small or large unilamellar liposome (SUVs and LUVs).
- (Previously Presented) The method of claim 44 in which the composition 84. is administered intramuscularly, intravenously, subcutaneously, intraperitonealy, via the respiratory tract, or via the gastrointestinal tract.
- (Previously Presented) The method of claim 44 in which the dose of 85. antigen is over 0.01 ng per kilogram of patient body weight.
- 86. (Previously Presented) The method of claim 85 in which the dose is less than 1000 ng per kilogram of patient body weight.
- (Previously Presented) The method of claim 85 in which the dose is less 87. than 100 micrograms per kilogram of patient body weight.

Serial No.: 09/423,546

Filed: November 12, 1999

Page : 6 of 7

88. (Previously Presented) The method of claim 44 in which the composition is administered in multiple doses, the first of which is administered at least 2 days prior to potential endotoxin exposure.

89-92. (Cancelled)

- 93. (Previously Presented) The method of claim 44 in which the composition further comprises an adjuvant.
- 94. (Previously Presented) The method of claim 93 in which the adjuvant is alum.

95-98. Cancelled

- 99. (Previously Presented) A method of reducing adverse effects of endotoxin in a warm-blooded animal, which method comprises administering to the warm-blooded animal an effective amount of antibody produced by immunization with a composition according to claim 44 or claim 59.
- 100. (Previously Presented) The method of claim 99 in which the antibody comprises a substantial percentage of IgM antibody.

101-111. Cancelled